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ABSTRACT

The author discusses the specifics of planning new facilities and restructuring existing ones for intramural and recreational use by handicapped and normal individuals. Detailed are suggestions for general accessibility (including parking, ramps and door hardware aspects), toilet facilities, swimming pools, and such miscellaneous facilities as public telephones and drinking fountains. (CL)

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FACILITY CONSIDERATION FOR HANDICAPPED

INTRAMURAL PARTICIPANTS

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At last year's conference, I presented a paper on Adaptive Intramural Programs. I would now like to expand on that topic area and cover facility considerations for the handicapped intramural participant.

It is quite clear that the great number of disabled and/or handicapped persons are not receiving the benefits of our intramural and recreational programs. The severity of their disabilities, architectural barriers and the slowness of our professionals to adjust their programs and facilities to meet the needs have all been contributing factors.

We have certainly started to move in the right direction by adapting our programs, but now we must go even further by making sure that any future facilities that are built take into consideration the handicapped and disabled, and if possible the adaptation of present facilities to whatever extent possible.

Just to refresh your memory as to some of the many disabilities and handicaps you might encounter, let me now mention a few: wheelchair, amputees, visually impaired, perceptual-motor problems, cardiac problems and emotional problems just to mention a few.

To delve a little further into this problem, and in order to help you in your planning of any new facility, or in restructuring existing buildings, it is important that you know some of the difficulties that our impaired, disabled and handicapped people have in utilizing intramural-recreational facilities. Some of these problems are:

1. Limitation in walking
   a. difficulty in walking distances because of muscular weakness due to disease or age.
   b. difficulty in walking on non-level and non-smooth surfaces because of braces, crutches, cardiac problems, flexibility or coordination or inability to walk.
   c. inability to walk, but able to propel themselves in a wheelchair on level surfaces.
   d. inability to propel a wheelchair because of extensive disability.

2. Limitations in seeing and/or hearing
   a. difficulty in seeing and/or hearing warnings and safety hazards because of limited vision or audition due to disability or age.
   b. or because of extensive disability

3. Limitations in the use of hands and arms
   a. difficulty in opening gates, doors, manipulating equipment, etc. because of muscle and joint weakness, or because of the necessity of manipulate crutches, a cane or wheelchair;
   b. or because of extensive disability in the muscles and joints of the arms and hands.

4. Limitations in understanding information, directions and warnings.
   a. difficulty in reading printed signs because of blindness, or severe intellectual impairments;
   b. or because of partial blindness or intellectual impairment.

In general, our impaired, disabled or handicapped can and should enjoy the same basic intramural recreational experiences as do the so called "normal" participants if the proper opportunity is provided. However, recreational facilities planners too often neglect the small, but special needs of the handicapped.

Some thoughts that you should consider are:

1. The disabled should be included in existing programs whenever possible.
2. These programs should be planned for the adults as well as the children that are impaired, disabled or handicapped.
3. Facilities should be planned for year round participation.
4. Program planners and officials should consider the following three levels of intramural-recreational participation by disabled persons:

Those able to participate in activities with the non-disabled when facilities and programs are adapted for their use.

Those who for physical or psychological reasons are not ready to recreate with non-handicapped persons. Existing facilities can be reserved at certain hours for their use if facilities are adequately adapted. These areas can be used for instructional periods to prepare the disabled for intramurals or recreation with the non-disabled.

Those so severely disabled or socially withdrawn that they need a sheltered environment. Special areas need be set aside for them.

5. The usual design and construction of facilities often limit or prevent handicapped people from participating in our programs. Thoughtful planning can eliminate architectural barriers.

In planning for the handicapped, the Bureau of Outdoor Recreation and most groups that work with or for the handicapped recommend that existing facilities be modified to accommodate their needs. It is urged also that maximum access be provided to all activities in which disabled persons might participate or be spectators.

The U.S.A. Standard Specifications for making buildings and facilities accessible to and useable by the physically handicapped recommends adaptations of facilities that allow disabled persons to assist themselves. For example, steps are augmented by ramps

and paths for wheelchairs; doorways are made wider and easier to open; grab-bars are placed in rest rooms, drinking fountains are lowered, step down curbs are modified, etc.

Some of the more exacting specifications in facility adaptation and construction are as follows:

1. Information: Special signs and maps should direct wheelchair occupants and other handicapped persons to paths and facilities adapted to their use. Signs should be readable by those with impaired sight.

II Access

a. Parking: Stalls should be made 12'-0" wide for both perpendicular and diagonal parking. Drop curbs should be provided at convenient locations for wheelchair access to walks. Avoid wheelchair circulation behind cars.

b. Walks: Should have a minimum width of 48". Walk pavement should have a hard non-slip surface of concrete, sealed asphalt, etc. Walks should blend with the adjacent ground and have a minimum gradient. Care should be taken to minimize expansion joints and expansion joint filler which expands above the walk surface. Walks which cross drives or parking areas, should blend to the level of the drive or parking area by using drop curbs. Avoid steps and sharp breaks in grade in walks.

c. Ramps: Should be provided for access to facilities when required by topography. Ramps should be constructed with a non-slip surface; 37" minimum width between railings, but 72" wide for two-way circulation. The maximum gradient for ramps should be 8.33%; a preferred grade we be 5%, with smooth transition to upper and lower levels. Platforms on ramps should be provided at the top and bottom, at 30' intervals, and at all changes of direction. Handrails, preverably on both sides, should be 32" high, 2" from the wall, and extending at least 12" beyond the top and bottom of the ramp.

Curbs 2" high and 4" wide made of wood or concrete should be provided under handrails and adjacent to walls to prevent wheelchair scuffing rough walls or catching railing posts. If because of extreme site conditions, the allowable maximum gradient for ramps cannot be maintained, ramps should still be constructed as a steep ramp is less of a barrier than steps, and a second party can be called for assistance.

d. Stairs: Stairs should have riser heights of standard size (6") but without having abrupt square nosing. Steps with forward sloping risers are better for physically disabled peopel. Railing should be set at 32" above the tread.

e. Doors and Doorways: Doors should have a minimum clear opening of 32" (preferably 36") and should be operated by a single effort. The floor, both on the inside and outside, should be level for a distance of 5 feet. As much as possible, thresholds should be flush with the floor.

f. Door Hardware: Each door should have three hinges with kick plates 16" high. Door closers should be the time-delay type. Vertical bar type, pull handles should be placed 36" from floor with an additional pull handle placed near the hinge to enable wheelchair occupant to close the door, if door closers are not provided. Safety glass lights 6" x 42" high can be placed 28" above floor if privacy is not required. Metal edge strips 40" high should be added to protect wood door.

III. Toilet Facilities

a. Toilet stall should be 3'-0" wide, 5'-0" deep, with a door 32" wide swinging out; handrails on each side, 33" high parallel to floor; and a wall mounted water closet 20" high.

b. Urinals should be floor mounted or, if wall mounted, the opening should be no higher than 19" above floor and should be equipped with a horizontal handrail.

c. Labatories with narrow aprons, mounted at a height of 30" from the underside of apron to the floor. Plumbing should be placed high under labatory to avoid legs and chair. Hot water and drain pipes should be insulated.

d. Hand dryer should be set at a 40" maximum above the floor.

e. Mirror should be set no higher than 40" above the floor.

f. Circulation in public toilets should be carefully checked for use by handicapped in wheelchairs.

IV. Swimming Pools

a. Pools can be made accessible in four ways:
   1. Pool coping raised 19½" to 20" above pool deck.
   2. Deck ramped down adjacent to pool coping on one side to provide a well 19" to 20" below coping.
   3. A ramp provided on the inside of the pool.
   4. An elevator provided in the pool.

(The most suitable method for public pools would be No. 2.)

When coping is raised above the pool deck, the coping should cantilever over the deck area to provide room for wheelchair foot rest. Copings should have a smooth non-slip finish and adequate pipe handles should be provided on coping. Water level of pool should be as high as possible to top of coping (about 3" or 4"). Skimmers would enable water level to be kept at this height in the pool.

b. Locker rooms should have ample circulation space for wheelchair, and benches should be omitted in certain locations.
c. Changing areas or cubicles should be provided without benches for women and possibly for men.
d. Showers should be individual cubicles for both men and women. Benches 19½" high, faucets 36" high and hose extension for shower spray should be provided. Handrails 36" high around shower cubicle would be required. Cubicle should be large enough to permit transfer from a wheelchair to a bench by disabled persons. Shower curb should be omitted.

V. Miscellaneous Facilities

a. Public telephone should be wall mounted with acoustic side shield and should be mounted 30" above floor. (30" to underside of telephone shelf with pay phone on shelf.)
b. Food service areas should have tables with height 30" from the floor to underside of table. Cafeteria self-service areas should be adapted to wheelchair use.
c. Drinking fountains of standard free-standing type can be adapted for use by wheelchair occupant by placing a side mounted basin and bubbler 30" above grade. If wall mounted drinking fountains are used they must be set at a height of 30". Note: If drinking fountains are adapted to the 30" height a a step for children may be omitted.

The material and specific recommendations in this paper are not my own. They were taken from source materials I have gathered and proper credit should be given to everyone who has contributed towards improving the conditions for the handicapped. Special consideration and thanks is extended to the Department of Interior, Bureau of Outdoor Recreation, the National Recreation and Park Association and the State of New York for its comprehensive plans for facilities.

As you can see from the previously mentioned recommendations, there is an awful lot that can be done. There is still an awful lot that needs to be done, and finally there is an awful lot of things, ideas, innovations and programs that we as intramural-recreation directors must get done.

Remember, leisure time is for everyone.

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